REMARKS

This Amendment is submitted in response to the Non-Final Office Action dated September 29, 2010.

With respect to the rejection under section 112, first paragraph, the claims have been amended as previously provided as further supported in the specification. For example, see at least paragraphs [0027]-[0036] of the published specification for clarification on the underlying layer. As such, Applicants believe that the claims at issue are enabled and further should be understandable by one skilled in the art. Therefore, Applicants believe that the section 112 rejections should be withdrawn.

Further, the claims have been rejected for obviousness reasons in view of US5479382 (Nishida) and *Handbook of Advanced Electronic and Photonic Materials and Devices*, 2001, pages 59-102, Mazaleyrat et al. ("Mazaleyrat"). As embodied by the claims, the underlying layer of the magnetic recording medium is formed on the substrate, wherein the underlying layer is formed of tetraethoxysilane as a feedstock, and the underlying layer is a layer which is formed of silicon oxide and a mixture thereof and in which a large number of spherically-shaped voids of the same size are uniformly formed by removing spherically-shaped micelles which are self-arrayed in a face-centered cubic lattice configuration by F68 ($E0_{77}$-$P0_{29}$-$E0_{77}$) or F108 (EO_{133}-PO_{50}-EO_{133}) as a triblock copolymer, and a large number of spherically-shaped voids of the same size which are regularly arrayed in a nano-scale are uniformly demonstrated in a face-centered cubic lattice configuration by using the physical mechanism of the self organization phenomenon.

In addition, the surface of the underlying layer on which the recording layer formed of the amorphous magnetic material is deposited has been processed so that the recesses by voids which are the same size are regularly arrayed in a nano-scale, and are uniformly demonstrated in a face-centered cubic lattice configuration by using the physical mechanism of the self organization phenomenon.

Further, the recording layer is formed of the amorphous magnetic material including protuberances. Each protuberance is formed independently by the amorphous magnetic material which is layered on each of the recesses demonstrated in the underlying layer, wherein each protuberance is discrete with respect to one another. Therefore, the recording layer formed of

the amorphous magnetic material can be utilized as a patterned media which is formed of a recording mark of extremely small size (nano-size).

In other words, because the underlying layer has a large number of spherically-shaped voids of the same size which are regularly arrayed in a nano-scale and are uniformly demonstrated in a face-centered cubic lattice configuration by using the physical mechanism of the self organization phenomenon, the surface of the underlying layer on which the amorphous magnetic film is deposited has been processed so that the recesses by voids are demonstrated uniformly. It has a technical meaning to include the voids in the underlying layer.

On the other hand, Nishida (US patent 5,479,382) fails to disclose or suggest the claimed invention. While the disclosed technology of Nishida shows that forming a recording layer continually in the entire surface on the underlying layer, it is not shown that the recording layer is formed of the amorphous magnetic material including protuberances, each of the protuberances is formed independently by the amorphous magnetic material which is layered on each of the recesses demonstrated in the underlying layer, and each of the protuberances is discrete with respect to one another. Mazaleyrat fails to cure the deficiencies of Nishida. Therefore, Applicants believe that the claimed invention is distinguished from the cited prior art, and thus the obviousness rejection should be withdrawn at least in view of same. If the rejection is maintained, Applicants respectfully request the Examiner clarify what specifically teaches the claimed voids and protuberances.

For at least the reasons above, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit reconsideration of same.

Respectfully submitted,

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